Comparisons of Job Characteristics

Focus Occupation: Computer and Information Systems Managers (11-3021)
Associated Occupation: Computer and Information Scientists, Research (15-1011)

Compare Knowledge
Compare Skills
Compare Abilities
Compare Detailed Work Activities
Compare Tools and Technologies

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge — Similarity of Focus Occupation to Associated Occupation: 73

Focus Occupation: Computer and Information Systems Managers (11-3021)
Associated Occupation: Computer and Information Scientists, Research (15-1011)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Computers and Electronics	8.4	22.8	20.0	<	Expanded education and/or training may be required
Mathematics	9.2	18.3	10.4	<<	Extensive education and/or training may be required
Education and Training	9.2	16.8	7.8	<<	Extensive education and/or training may be required
English Language	11.2	16.6	12.2	<<	Extensive education and/or training may be required
Engineering and Technology	5.7	12.0	6.6	<<	Extensive education and/or training may be required
Telecommunications	3.9	11.9	10.9	0	Current knowledge level may be sufficient
Design	5.2	11.4	5.9	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills — Similarity of Focus Occupation to Associated Occupation: 64

Focus Occupation: Computer and Information Systems Managers (11-3021)
Associated Occupation: Computer and Information Scientists, Research (15-1011)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Systems Evaluation	6.4	14.7	12.2	<	A higher skill level may be required
Systems Analysis	6.5	13.6	10.8	<	A higher skill level may be required
Programming	2.2	12.4	6.9	<<	Extensive development of skills in this area may be required
Time Management	8.9	12.2	11.1	0	Current skill level may be sufficient

Mathematics	6.2	11.3	7.1	<<	Extensive development of skills in this area may be required
Operations Analysis	5.0	10.6	9.6	<	A higher skill level may be required
Technology Design	2.6	10.0	5.9	<<	Extensive development of skills in this area may be required
Management of Financial Resources	3.3	7.8	8.8	>	Skill level is likely sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities — Similarity of Focus Occupation to Associated Occupation: 96

Focus Occupation: Computer and Information Systems Managers (11-3021)
Associated Occupation: Computer and Information Scientists, Research (15-1011)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Deductive Reasoning	10.6	14.6	13.2	<	Some improvement in abilities may be required
Inductive Reasoning	10.2	14.1	13.2	0	Current ability level may be sufficient
Problem Sensitivity	11.1	13.9	13.0	0	Current ability level may be sufficient
Fluency of Ideas	7.6	12.8	10.1	<	Some improvement in abilities may be required
Information Ordering	9.9	12.6	12.3	0	Current ability level may be sufficient
Category Flexibility	9.0	12.4	10.2	<	Some improvement in abilities may be required
Originality	7.6	11.0	10.1	0	Current ability level may be sufficient
Mathematical Reasoning	6.3	10.8	7.7	<<	Extensive improvement in abilities may be required
Number Facility	6.3	9.8	7.5	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common — Similarity of Focus Occupation to Associated Occupation: 82

Focus Occupation: Computer and Information Systems Managers (11-3021)
Associated Occupation: Computer and Information Scientists, Research (15-1011)

Work Activities	Exclusivity of Activity
Consult with managerial or supervisory personnel	60
Develop policies, procedures, methods, or standards	21
Direct and coordinate activities of workers or staff	3
Follow data security procedures	77
Follow data storage procedures	75
Prepare reports	8

Test computer programs or systems	78
Use computer application flow charts	84
Use computer programming language	82
Use project management techniques	47
Work as a team member	36

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common	Similarity of Focus Occupation to Associated Occupation: 78

Focus Occupation: Computer and Information Systems Managers (11-3021)
Associated Occupation: Computer and Information Scientists, Research (15-1011)

Tools and Technologies	Exclusivity
Computer printers	2
Computers	1
Content authoring and editing software	1
Data management and query software	1
Development software	4
Industry specific software	1
Media storage devices	21
Network service equipment	47
Operating environment software	12
System Cards	51

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.